

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/006831

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁷ A61K45/00, 38/00, 45/06, A61P17/00, 17/06, 19/02, 19/06, 19/10,
29/00, 31/04, 31/06, 31/10, 31/12, 37/02, 43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ A61K38/00-45/08, A61P1/00-43/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2005
Kokai Jitsuyo Shinan Koho 1971-2005 Toroku Jitsuyo Shinan Koho 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE (STN), EMBASE (STN), BIOSIS (STN), BIOTECHABS (STN), Caplus (STN),
WPI (DIALOG), JSTPLUS (JOIS), JMEDPLUS (JOIS)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2003-113116 A (Hitokazu NAKAO), 18 April, 2003 (18.04.03), Full text & US 2003/0068313 A1 & CA 2398030 A1 & JP 2003-104908 A & BR 200203181 A & US 6743425 B2	1-19, 32-50
Y	Yasato KOMATSU et al., "Nankotsu Eiyosho Chiryo to CNP", Clinical Calcium, 2003, 13(12), pages 1578 to 1581, full text	1-19, 32-50
Y	YASODA, A. et al., Natriuretic Peptide Regulation of Endochondral Ossification, J.Biol. Chem., 1998, 273(19), pages 11695 to 11700, full text	1-19, 32-50

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

15 June, 2005 (15.06.05)

Date of mailing of the international search report

05 July, 2005 (05.07.05)

Name and mailing address of the ISA/

Japanese Patent Office

Authorized officer

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INTERNATIONAL SEARCH REPORT

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PCT/JP2005/006831

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002-356437 A (Takeda Chemical Industries, Ltd.), 13 December, 2002 (13.12.02), Claims; examples & WO 02/11752 A1 & AU 200176722 A	1-19, 32-50
Y	JP 59-51221 A (Eisai Co., Ltd.), 24 March, 1984 (24.03.84), Full text & EP 106177 A & US 4446129 A	4, 5, 9-12
Y	WO 02/087620 A1 (Chugai Pharmaceutical Co., Ltd.), 07 November, 2002 (07.11.02), Claims; examples & EP 1391211 A1 & AU 200221549 A1 & US 2004/0138285 A1	7, 9-12, 42, 43
Y	JP 4-74198 A (Toshiyuki MATSUO), 09 March, 1992 (09.03.92), Claims; Fig. 5 & EP 466174 A1 & US 5340920 A	10-12, 16-18, 46-48
Y	JP 4-327598 A (Shionogi & Co., Ltd.), 17 November, 1992 (17.11.92), Claims; Par. Nos. [0017], [0018]; Sequence listing (Family: none)	10-12, 16-18, 46-48
Y	JP 11-196873 A (Smithkline Beecham PLC), 27 July, 1999 (27.07.99), Claims & EP 922762 A1 & CA 2223075 A1	32-39
P, X P, Y	Yasato KOMATSU, "Nankotsu Saibo ni Okeru C-Gata Natriumu Rinyo Peptide Fukakka ni yoru Sayo Kiko ni Kansuru Kenkyu, C-Gata Natrium Rinyo Peptide Fukakka ni yoru Nankotsu Kesson Shufuku no tameno Atarashii Chiryoho no Kaihatsu to sono Rinsho Oyo ni kansuru Kenkyu", Heisei 15 Nendo Sokatsu- Buntan Kenkyu Hokokusho (Kosei Rodo Kagaku Kenkyuhi Hojokin Human Genome Saisei Iryo Nado Kenkyu Jigyo), 2004, March, pages 10 to 13	1-19, 40-50 32-39
P, A	Hiroshi KAWAGUCHI, "Saisei Sokushin Inshi", Japanese Journal of Clinical Medicine, 2005, 63 (Zokango 1), pages 676 to 679	1-19, 32-50

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 20-31, 51

because they relate to subject matter not required to be searched by this Authority, namely:

The inventions as set forth in these claims pertain to methods for treatment of the human body by therapy.

(Article 17(2)(a)(i) of the PCT, Rule 39.1(iv) of the Regulations under the PCT)

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

Claims 1 to 8, 13, 14, 19, 32 to 44, 49 and 50o Claims 1 to 8, 13, 14, 19, 40 to 44, 49 and 50

Each of the inventions according to these claims relates to a drug and the active ingredient thereof is restricted exclusively by its function, i.e., a GC-B activator, a nonsteroidal antiinflammatory agent or a cyclooxygenase inhibitor.

However, it is not self-evident based on the description even by a person skilled in the art substances of what chemical structures have these functions. Namely, it is unclear by merely specifying the functions what compounds are available as the active ingredient.

According to the statement in the description of the present case, specific results of having these functions were confirmed exclusively in the cases of using CNP as a GC-B activator and indometacin as a nonsteroidal antiinflammatory agent or a cyclooxygenase inhibitor and nothing is stated in the cases of using other components. Therefore, it cannot be considered that the same effects as those reported in the description can be established in such cases.

Such being the case, the inventions according to these claims are unclear from the statements in these claims and it does not appear that the description discloses the inventions in a manner sufficiently clear and complete for the inventions to be carried out by a person skilled in the art. Thus, the inventions according to these claims are not sufficiently supported by the description (PCT Articles 5 and 6).

o Claims 32 to 39

Each of the inventions according to these claims relates to a drug screening method.

Generally speaking, an activity level usable as a standard for specific judgment should be clearly indicated in an invention relating to a screening method. Examining the disclosure in the description of the present case, however, no specific indication in the screening method is given. Examining the statements in EXAMPLES, moreover, it cannot be recognized that a screening was performed in practice.

Such being the case, it does not appear that the description discloses the inventions according to these claims in a manner sufficiently clear and complete for the inventions to be carried out by a person skilled in the art. Thus, the inventions according to these claims are not sufficiently supported by the description (PCT Articles 5 and 6).

Since the inventions according to these claims are not supported by the disclosure in the description, it is to be noted that, in marking this international search report, prior art documents were searched exclusively based on the cases wherein CNP and its derivatives as claimed in claims 9 to 12 and the specific cyclooxygenase inhibitor as claimed in claim 50 were employed as the active ingredient (claims 1 to 8, 13, 14, 19, 40 to 44, 49 and 50) and within a reasonable scope from the disclosure in the description.